Surge Protection
For *Business-Critical Continuity™*

Liebert SS Series
Surge Protective Device

Approved by Motorola R56 2005 Version, Standards and Guidelines for Communication Sites — Type 1, Type 2 Devices

Utilizes advanced SAD/MOV array technology for industry leading transient suppression voltages.

Incorporates Liebert's "state-of-the-art" Interceptor technology for enhanced safety and performance coordination of all surge and fuse components.

- Modular design for flexibility and ease of servicing.
- 160 kA surge current capacity for increased reliability.
- Real-time system monitoring.
- Product performance and safety standards — ANSI/UL 1449 Third Edition, UL 1283, cUL Listed.

Two Different Units Available:

- Type 1 Hybrid Surge Protection — 20 kA of SAD protection and 160 kA of MOV protection.
- Type 2 MOV only Surge Protection — 160 kA of MOV protection.

Warranty:

Covered 24x7 by Emerson Network Power Service Business: 10-Years for Parts, 5-Years On-Site Labor.

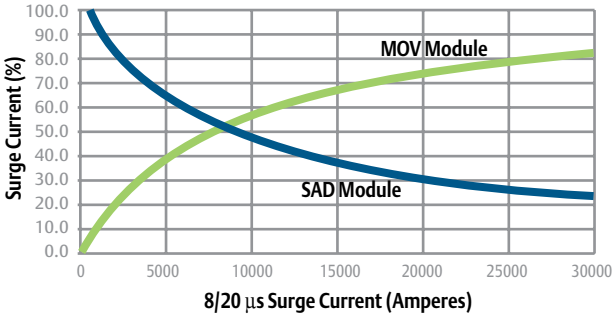
Typical Applications:

- Cell Sites.
- Communication shelters.
- AC main and distribution panels and load centers.
- Transmitters.
- Base Stations.

EMERSON™
Network Power

Liebert SS Series Surge Protective Device (SPD)

MOV/SAD Current Sharing – Type 1 Model



The Liebert Answer:

The Liebert SS Series Type I Model offers a true, coordinated multi-stage system of suppression. It integrates the fast response time of the silicon avalanche diode (SAD) with the high-energy capability of the metal oxide varistor (MOV) for increased reliability and performance. This unique circuitry does not sacrifice the sensitive SAD module when subjected to a damaging high-energy transient event.

Technical Specifications

Voltage Configurations	120/240V and 120/208V (Please consult factory for additional voltage configurations)
Maximum Continuous Operating Voltage (MCOV)	≥125%
Fault Current Raiting (AIC)	200kAIC
Location Type	Type 1
Nominal Discharge Current (In)	20kA
Operating Frequency Range	47-63 Hz
Connection	Parallel (4-6 AWG recommended and 14-1/0 AWG capable); wire lug or disconnect
Modes of Protection	Line to Neutral/standard
Surge Current Capacity	160 kA per mode
Response Time	<0.5 nanoseconds
Dimensions	15.32 in x 13.32 in x 6.60 in
Weight	35 lbs.
Operating Temperature	-40°C to +60°C
Status Indication	LEDs, Form "C" contacts - 2 sets
Form "C" Contact Rating	120VAC, 5.0 amps, pF of 1.0
Certifications	ANSI/UL 1449 Third Edition, UL 1283 (Type 2 Locations), cUL Listed
Technology	Type 1 Hybrid TVSS - 20 kA of SAD protection and 160 kA of MOV protection Type 2 MOV only TVSS - 160 kA of MOV protection
Enclosure	NEMA 4X; suitable for indoor or outdoor applications
Warranty	Covered 24x7 by Emerson Network Power Service Business 10-Years Parts and 5-Years On-Site Labor

Typical NEMA LS1 Data

	Type 1 Unit; Line - Neutral	Type 2 Unit; Line - Neutral
	120/208V & 120/240V	120/208V & 120/240V
	Clamping Voltage (Vpk)	Clamping Voltage (Vpk)
Category A Ringwave (6 kV / 0.2 kA)	176	284
Category B Ringwave (6 kV / 0.5 kA)	288	304
ANSI/UL 1449 Third Edition Voltage Protection Rating (VPRs)	600	600
Category B Combination Wave (6 kV / 3.0 kA)	304	336
Category C Combination Wave (20 kV / 10.0 kA)	440	408

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Emerson Network Power.
The global leader in enabling *Business-Critical Continuity*™.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- **Surge Protection**